



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.				
10/566,801	01/30/2006	Parag Garg	US03 0245 US2	8049				
65913 NXP, B.V. NXP INTELLECTUAL PROPERTY DEPARTMENT M/S41-SJ 1109 MCKAY DRIVE SAN JOSE, CA 95131	7550 01/23/2009		<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">SHEDRICK, CHARLES TERRELL</td></tr></table>		EXAMINER		SHEDRICK, CHARLES TERRELL	
EXAMINER								
SHEDRICK, CHARLES TERRELL								
			<table border="1"><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>2617</td><td></td></tr></table>	ART UNIT	PAPER NUMBER	2617		
ART UNIT	PAPER NUMBER							
2617								
			<table border="1"><tr><td>NOTIFICATION DATE</td><td>DELIVERY MODE</td></tr><tr><td>01/23/2009</td><td>ELECTRONIC</td></tr></table>	NOTIFICATION DATE	DELIVERY MODE	01/23/2009	ELECTRONIC	
NOTIFICATION DATE	DELIVERY MODE							
01/23/2009	ELECTRONIC							

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary

Application No.

10/566,801

Applicant(s)

GARG, PARAG

Examiner

CHARLES SHEDRICK

Art Unit

2617

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-12 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-12 and 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/17/08 has been entered.

Response to Arguments

2. Applicant's arguments filed 12/2/08 have been fully considered but they are not persuasive.
3. Applicant argues that Rom (EP 0589552 A2) in view of Hendrik et al. (EP 0 851 633 A2) ("Hendrik") does not teach the amended limitation wherein the trigger event is initially determined by the first access point without receiving a request to switch from the mobile device; and wherein the access classifications include a path of motion of the mobile device.

The Applicant's rationale includes:

"Conventionally, in a WLAN, the wireless device monitors the communication with the access point and searches for other access points to switch with when a predetermined level of quality/throughput has deteriorated (specification at page 1, lines 8-1). In contrast to the present claims, the combination of Rom and Hendrik discloses nothing more than a conventional initiation by the wireless device to change access points (see Hendrik Abstract, lines 5-8 and Rom, col. 5, paragraph [0031])"

However, The Examiner respectfully disagree. To address the Applicants first assertion that Rom (EP 0589552 A2) in view of Hendrik et al. (EP 0 851 633 A2) ("Hendrik") does not teach the amended limitation wherein the trigger event is initially determined by the first access point without receiving a request to switch from the mobile device. The Examiner points the Applicant to at least Rom col. 5 lines 30 – 48 wherein in one embodiment, the determination by the node of whether a handoff is necessary may be made in response to a request from the access point with which the node is currently communicating, as shown in FIG. 3C. The current access point communicates a request to the node that it initiate the re-association process in order to be handed off to another access point. The node has the option of accepting or rejecting this request. In another variation, the determination of whether handoff is necessary may be made solely by the current access point. These latter two approaches are useful in the case that the current access point is associated with so many nodes that the traffic of messages communicated through the access point is exceeding its maximum predetermined load, even though the radio link between the node and the access point may be adequate.

To address the Applicants second assertion that Rom (EP 0589552 A2) in view of Hendrik et al. (EP 0 851 633 A2) ("Hendrik") does not teach the amended limitation wherein the access classifications include a path of motion of the mobile device. The Examiner points the Applicant again to the previously cited section in addition to at least col. 7 where Rom teaches that As shown in FIG. 4, in a conventional cellular telephone system, the system may be reconfigured at every point in the communication path in order to reroute a message from its source node to the access point that has accepted handoff of the node from the previous access point. As discussed above, this conventional method is too slow to accommodate the handoff of

a node that may be engaged in multiple conversations with other nodes. In contrast, the present invention avoids this degree of complexity. Instead of reconfiguring in advance every point throughout the path, the communication path remains intact except that the message is now forwarded from the old access point to the new access point. For example, when a message intended for the node is received at access point, AP forwards the message to the new access point. In this manner, the invention establishes connectivity of the node with network through the second access point. In addition, the old access point may inform other nodes and access points that node is now associated with new access point, thus allowing the other access points to adjust their parameters and communicate directly with access point. This process of informing other nodes and access points may be performed at a time convenient to do so, i.e., when there is a break in communications and need not be done immediately. By avoiding reconfiguration of the network at every point in the communication path, the present invention achieves a significant advantage over conventional systems.

4. Applicant argues that with regard to the combination of Rom and Hendrik, Applicant strongly disagrees that **Hendrik** discloses at col. 5, lines 1-15 the path of motion of the wireless device is considered when switching to another access point. The cited passage merely refers to the cover area of access points, and thus, the combination of Rom and Hendrik, as a combination, fail to disclose or in any way render obvious present claims 1 and 11 at least for this deficiency

5. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re*

Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Furthermore, The Examiner respectfully notes that Rom was cited to show the claimed feature.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-2, 4-12, and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rom EP 0589552 A2 in view of Hendrik et al. EP 0 851 633 A2, hereinafter, "Hendrik".

Consider **claims 1 and 11**, Rom teaches an Access Point device and method of network management in a network comprising a plurality of access points comprising: monitoring a communication channel between a mobile device and a first access point(e.g., see **col. 4 lines 53-56, col. 5 lines 12-13 and col. 5 lines 27-30**), at the first access point to determine whether a trigger event occurs(e.g., **col. 5 lines 28-30 and col. 5 lines 39-41**)(i.e., **determination made solely by the access point**), if the trigger event is determined to have occurred(e.g., see **col.5 line 49**)(i.e., **if the handoff is deemed necessary**): sending a switch-assessment request from the

first access point to one or more other access points of the plurality of access points(e.g., see **col.6 lines 4-9**)(i.e., **determined through communication**), receiving a switch-assessment response from at least one of the one or more other access points(e.g., see **col.6 lines 4-9**)(i.e., **determined through communication**), selecting a select access point from the at least one of the one or more other access points based on the switch-assessment response(e.g., see **col.6 lines 4-9**)(i.e., **determined through communication**), sending a switch-command from the first access point to the mobile device(e.g., see **col. 2 lines 28-30 and col. 6 lines 51-55**) to establish a communication channel between the mobile device and the select access point(**col. 6 lines 54-55**)(i.e., **handoff accomplished**); and defining a plurality of access classifications associated with the mobile device and at least one or more other access points of the plurality of access points and selecting the select access point based at least in part on one or more access classification (i.e., **administrative domain or particular authority, quality of signal, and load**)(e.g., see at least **col. 3 line 64-col. 5 line 17 and col. 6 line 55- col. 7 line 5**).

However, Rom does not specifically teach an access point maintaining a message buffer for the mobile device until the switch from the access point to the select access point.

In analogous art, Hendrik teaches an access point maintaining a message buffer for the mobile device until the switch from the access point to the select access point (e.g., see at least **abstract and summary of invention**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Rom to include an access point maintaining a message buffer for the mobile device until the switch from the access point to the select access point for the purpose of delivering messages to a roaming subscriber as taught by Hendrik.

Consider **claims 2 and 12 and as applied to claims 1 and 11**, Rom as modified by Hendrik teaches wherein the trigger event is based at least in part on at least one of: a signal strength of communications from the mobile device an error rate associated with communications to the mobile device, and traffic through the first access point(e.g., see **col. 4 lines 53-56**).

Consider **claim 20 and as applied to claim 11**, Rom as modified by Hendrik teaches the claimed invention further including determining a direction of movement of the mobile device, and wherein the trigger event is based at least in part on the direction of movement of the mobile device (i.e., **geographic location or predicted path with regarded to moving towards or away from an access point**)(e.g., see **col. 5 lines 10-15**).

Consider **claim 14 and as applied to claim 11**, Rom as modified by Hendrik teaches the claimed invention further including receiving other information at the first access point regarding communications from the mobile device and determining the direction of movement based at least in part on this other information (e.g., **information regarding signal quality**)(**col. 5 lines 25-30**).

However, Rom does not specifically teach an access point maintaining a message buffer for the mobile device until the switch from the access point to the select access point.

In analogous art, Hendrik teaches an access point maintaining a message buffer for the mobile device until the switch from the access point to the select access point (e.g., see **at least abstract and summary of invention**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Rom to include an access point maintaining a message buffer

for the mobile device until the switch from the access point to the select access point for the purpose of delivering messages to a roaming subscriber as taught by Hendrik.

Consider **claims 5 and 15 and as applied to claims 1 and 11**, Rom as modified by Hendrik teaches the claimed invention further including providing configuration information to the mobile device to facilitate establishing the communication channel between the mobile device and the select access point (e.g., see col. 6 lines 27-39 and col. 6 lines 51-55).

Consider **claims 6 and 16 and as applied to claims 5 and 15**, Rom as modified by Hendrik teaches the claimed invention further including receiving the configuration information from the select access point (e.g., see col. 6 lines 27-39 and col. 6 lines 51-55).

Consider **claim 7 and as applied to claim 1**, Rom as modified by Hendrik teaches the claimed invention further, further including sending periodic messages from the mobile device to the first access point to facilitate the monitoring of the communications channel between the mobile device and the first access point (e.g., the signal strength/ traffic data constantly transmitted by the mobile device, i.e., beacons e.g., are also well known in the art)(col. 4 lines 53-56)

Consider **claims 8 and 17 and as applied to claims 1 and 11**, Rom as modified by Hendrik teaches the claimed invention wherein sending the switch-assessment request includes sending parameters associated with the mobile device to the one or more other access points (e.g., see col. 5 lines 49-57 and col. 6 lines 40-55).

Consider **claims 9 and 18 and as applied to claims 8 and 17**, Rom as modified by Hendrik teaches the claimed invention wherein selecting the select access point is based at least in part on at least one of: a compatibility between the mobile device and the select access point,

traffic at the select access point traffic of the mobile device, and a predicted path of the mobile device(e.g., see col. 5 lines 49-57 and col. 6 lines 40-55).

Consider **claim 10 and as applied to claim 1**, Rom as modified by Hendrik teaches wherein the access classifications include preferred, acceptable (i.e., **based upon the signaling threshold and quality of signal**), forbidden, subscription level (i.e., see **administrative domain and particular authority**), and quality of service parameters (i.e., see **quality of signal**) (e.g., see at least col. 3 line 64-col. 5 line 17 and col. 6 line 55- col. 7 line 5)..

Consider **claim 19 and as applied to claim 11**, Rom as modified by Hendrik teaches the claimed invention further including defining an access classification associated with the mobile device and at least one of the one or more other access points of the plurality of access points and selecting the select access point based at least in part on the access classification (e.g., see **col. 5 lines 49-57 and col. 6 lines 40-55**).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES SHEDRICK whose telephone number is (571)272-8621. The examiner can normally be reached on Monday thru Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles Shedrick/
Examiner, Art Unit 2617

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617